

FOR YOUR INFORMATION...



City of Taylorsville
Community Development Department
2600 West Taylorsville Boulevard
Taylorsville, Utah 84118 (801) 963-5400



City of Taylorsville
Information Form

B-9

COLD WEATHER

Cold Weather Cement Requirements

The following cold weather cement construction requirements are applicable when the ambient temperature falls below 40° Fahrenheit or when cement-based material being installed is below 40° Fahrenheit. The City of Taylorsville Building Department will strictly enforce cold weather cement construction requirements as outlined below.

Overview:

Cold weather can negatively affect the curing process of many types of cement. Therefore, it is necessary to take certain precautions to protect this type of construction from the effects of cold weather. It is the responsibility of the contractor (or homeowner) to comply with the requirements of the International Building Code (IBC) for placement of concrete and other cement-based products during cold weather conditions. Cold weather construction requirements specifically apply to footing excavations, foundation forms, stucco applications, brick veneers, and other cement-based products installed during winter months.

Concrete Requirements:

Generally, concrete temperature must be maintained above 50° Fahrenheit and in a moist condition for at least the first 7 days of curing, except when curing is accelerated (IBC 1905.11.1). Concrete temperature requirements vary based on the thickness of the concrete. For more specific information on temperature requirements see "Cold Weather Construction Precautions and Recommendations" below.

Adequate equipment must be provided for heating concrete materials and protecting concrete during freezing or near-freezing conditions. All concrete materials, reinforcement forms, fill materials and ground soils that the concrete will come in contact with must be free from frost. Frozen materials or materials containing ice must not be used and will not be approved.

Exterior Plaster Requirements:

Portland-based cement products must not be applied to a frozen base or bases containing frost. Plaster mixes shall not contain frozen ingredients. Plaster coats shall be protected from freezing for a period of not less than 24 hours after set has occurred (IBC 2128.4).

Cold Weather Construction Precautions and Recommendations:

The following list is a set of recommendations that may assist you in protecting your work from the effects of cold weather. Depending on weather conditions, the Building Official may require compliance with certain precautionary construction techniques listed below:

- ☐ Plan ahead. Provide heaters, enclosures and protective materials before they are needed.
- ☐ Arrange for extra cement, Type III cement or accelerating admixture.
- ☐ Handle concrete with a minimum of delay.
- ☐ Heat the water and aggregates before mixing.
- ☐ Use admixtures carefully, as directed.
- ☐ Use air-entrained concrete.
- ☐ Remove snow, ice and frost from sub-grade and all surfaces that will be in contact with the concrete.
- ☐ Heat enclosures with steam or blowers, rather than stoves or "salamander" type heaters.
- ☐ If "salamander" type heaters are used they must be vented to the outside of the enclosure and must be raised above the surface of the concrete.
- ☐ Protect concrete from drying out until expiration of curing period.
- ☐ Leave forms in place as long as possible.
- ☐ Maintain temperature of concrete for 3 days at 55° Fahrenheit for thin sections (i.e. 3 inches), 50° Fahrenheit for moderate sections (i.e. 12 inches), or 45° Fahrenheit for heavy sections (i.e. 24 inches). For Type III cement or cement with a curing accelerator, cement temperature must be maintained for a minimum of 2 days.
- ☐ Maintain concrete temperature at 40° Fahrenheit for 4 additional days, permitting the concrete to dry somewhat before exposing it to freezing temperature.
- ☐ Avoid overheating the concrete.

Questions?

If you have any questions regarding construction or inspection requirements for your project please contact the Taylorsville City Building Department at (801) 955-2030.